

AMENDMENTS TO THE DRAWINGS:

The attached Replacement Drawing Sheet (Sheet 5/25) includes changes to Figure 2F. Specifically, reference numerals "43" and "45" are changed to ~~44~~ and ~~63~~, respectively, in order to avoid duplicative use of reference numerals.

Attachments: Replacement Drawing Sheet 5/25 (one sheet) showing Figure 2F.

REMARKS

Claims 1-27 remain pending in this Application. By this Amendment, Applicants: cancel claim 28; amend the specification to correct minor informalities and to conform the specification with the drawings as originally filed; and amend Figure 2F of the drawings in order to avoid duplicative use of reference numerals. No new matter is added by these amendments.

In the Office Action dated June 27, 2005, the Examiner: (1) rejected claim 28 under 35 U.S.C. § 101 as being directed to non-statutory subject matter; (2) rejected claims 1-10, 13-22 and 25-28 under 35 U.S.C. § 103(a) as being unpatentable over McLennan, "Object-oriented Programming with [incr Tcl] Building Mega-Widgets with [incr TK]," in view of Owens et al. (U.S. Patent No. 6,047,284), and Hostetter et al., "Curl: A Gentle Slope Language for the Web;" and (3) rejected claims 11, 12, 23 and 24 under 35 U.S.C. § 103(a) as being unpatentable over McLennan, in view of Owens et al., Hostetter et al. and TK Library Procedures, "TK-configure Widget Manual Page."

In view of the foregoing amendments and the following remarks, Applicants respectfully traverse each of these rejections. Each section of the Office Action is addressed under a parallel heading below.

Claim Rejections - 35 USC § 101

Claim 28 is rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Applicants respectfully disagree with the Examiner's characterization of

this claim. Nevertheless, in order to advance prosecution of the instant application, Applicants hereby cancel claim 28, without prejudice or disclaimer. Accordingly, Applicants respectfully submit that the Examiner's rejection of claim 28 is now moot.

Claim Rejections - 35 USC § 103

Claims 1-10, 13-22 and 25-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over McLennan in view of Owens et al. and Hostetter et al. Claims 11, 12, 23 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over McLennan, in view of Owens et al., Hostetter et al. and TK Library Procedures.

In order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art reference as modified must teach or suggest all the claim elements. See M.P.E.P. § 2143.03 (8th Ed., Rev. 2, May 2004). Second, there must be some suggestion or motivation, either in the reference or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the reference teachings. See *id.*, § 2143. Third a reasonable expectation of success must exist. Moreover, each of these requirement must "be found in the prior art, and not be based on applicant's disclosure." *Id.*, § 2143.03. Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness with respect to pending claims, for at least the following reasons.

Claims 1, 13, 25 and 26

Claims 1, 13, 25 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over McLennan in view of Owens et al. and Hostetter et al. With respect to claims 1, 13, 25 and 26, the Examiner asserts that McLennan discloses:

a method of processing data comprising: defining a class (E.g. see page 86, Figure 2-11 Fileview mega-widget and associated text) which supports an option data structure (E.g. see page 87, lines 24-30, "usual" option-handling code for `scro[ll]bars`) having, in instances of the class, references to option values (E.g. see page 87, lines 25-26, option - background, `troughcolor`), the option data structure including a type description of the option values; (E.g. see page 76, Figure 2-4 and page 86-87, Example 2-1 and associated text); [and] using the type description in the option data structure to process an operation on an option value in an instance of the class (E.g., see page 76, Figure 2-4, [and] page 79, Figure 2-6 and associated text).

Office Action (June 27, 2005), p. 3, ll. 1-9. Applicants respectfully disagree with the Examiner's characterization of McLennan.

Contrary to the Examiner's assertions, the options described by McLennan do not include "a type description of the option values," as recited in claims 1, 13, 25 and 26. As shown in Fig. 2-12 of McLennan, options in `[incr Tk]` are defined without any type description. Instead, the option definition "includes the three names for the option `[(option name, resource name and resource class)]`, an initial `[(default)]` value, and some code `[(defined in "config body")]` that should be executed whenever the option is configured." McLennan, p. 93, ll. 21-23; and Fig. 2-12. Applicants can find no teaching in McLennan related to "an option data structure ... including a type description of the option values." Consequently, McLennan also necessarily fails to teach "using the type description in the option data structure to process an operation on an option value in an instance of the class," as recited in claims 1 and 26, or "processing an operation on an

option value in an instance of the class using the type description in the option data structure,” as recited in claim 25 (note that claim 13 includes similar recitations).

Moreover, Owens et al. and Hostetter et al. are not relied upon to teach and, in fact, do not teach the above-noted deficiencies of McLennan.

Further, the Examiner admits that McLennan fails to disclose “defining a class which supports an option data structure having, in instances of the class, references to option values *without preallocation of memory space for the full option values.*” See Office Action (June 27, 2005), p. 3, ll. 10-11. The Examiner cites Owens et al. as teaching “allocating storage space for [an] object without storage space for an array element if the instantiation request does not specify an initial value for any of the data members of the array element,” and asserts that “it would have been obvious to incorporate the teaching of Owens into the teaching of McLennan ... so that the allocation of storage for array elements may be deferred until necessary.” Id., p. 3, ll. 12-19. However, the Examiner then admits that even the combination of McLennan and Owens et al. fails to teach using the type description to process an operation on an option value in an instance of the class “during compilation” (or by a compiler).

In an attempt to cure this deficiency, the Examiner asserts that Hostetter et al. teaches “using the type description [to process an operation on an option value in an instance of the class] *during compilation,*” (id., p. 4, ll. 1-10 (citing Hostetter et al., p. 1, ll. 22-29; and p. 7, ll. 11-12)) and asserts that “it would have been obvious ... to incorporate the teaching of Hostetter into the system of McLennan, Owens ... [in order to] use Curl[’s] mod[ern] object-oriented programming feature (object structure) to

compile to native code and execute without the need for any sort of interpreter” (id., p. 4, ll. 10-16). Applicants respectfully disagree.

Contrary to the Examiner’s assertions, Hostetter et al. does not teach an option data structure including “a type description *of the option values*,” as recited in claims 1, 13, 25 and 26 (emphasis added). Rather, as described in the cited portions of Hostetter et al., the type definition is applied to the class as a whole. See, e.g., Hostetter et al., § 4.1, “Types.” Applicants can find no teaching in Hostetter et al. (either in the portions cited by the Examiner or anywhere else) related to “an option data structure ... including a type description of the option values.” Consequently, Hostetter et al. also necessarily fails to teach, “during compilation, using the type description in the option data structure to process an operation on an option value in an instance of the class,” as recited in claims 1 and 26, or “a compiler which, when processing an operation on an option value in an instance of the class, using the type description of the option value,” as recited in claim 13 (note that claim 25 includes similar recitations).

For at least these reasons, the Examiner’s rejection lacks support in McLennan, Owens et al. and Hostetter et al., whether taken singly or in any combination. Specifically, even if these references could be combined as proposed by the Examiner (which Applicants dispute), the combination would fail to teach:

defining a class which supports an option data structure having, in instances of the class, references to option values without preallocation of memory space for the full option values, the option data structure including a type description *of the option values*; and

during compilation, using the type description in the option data structure to process an operation on an option value in an instance of the class.

Claim 1, ll. 2-7 (emphasis added). Note that claims 13, 25 and 26 include similar recitations. Accordingly, Applicants respectfully request that the rejection of these claims under 35 U.S.C. § 103(a) be withdrawn and the claims allowed.

Claims 2-10, 14-22 and 27

Dependent claims 2-10, 14-22 and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over McLennan in view of Owens et al. and Hostetter et al. However, these claims depend, directly or indirectly, from one of independent claims 1, 13 and 26. As explained above, the rejections of claims 1, 13 and 26 lack support in McLennan, Owens et al. and Hostetter et al., whether taken singly or in any combination. Consequently, the rejection of claims 2-10, 14-22 and 27 likewise lacks support in the references relied upon, for at least the same reasons given above with respect to claims 1, 13 and 26, and Applicants respectfully request that the rejection of claims 2-10, 14-22 and 27 under 35 U.S.C. § 103(a) be withdrawn and the claims allowed.

In addition, the Examiner alleges that McLennan teaches the subject matter of claims 6. See Office Action (November 19, 2004), p. 7, ll. 12-19 (citing McLennan, p.

81, Fig. 2-8 and associated text).¹ However, Applicants respectfully disagree with the Examiner's characterization of McLennan.

In the cited portions, McLennan discloses methods for building mega-widgets with [incr Tk]. Specifically, McLennan uses Tk "widgets" as components to create "mega-widgets," in [incr Tk]. Id., p. 71, ll. 8-12. When a mega-widget is constructed, the constructor for the least-specific class itk::Archetype is called first. Id., p. 76, ll. 13-15. When called, the constructor initializes some internal variables that keep track of component widgets and their configuration options. Id. As each component is created, the component's options are "merged" into a "master list" of options for the mega-widget. Id., p. 77, ll. 1-2; p. 78, ll. 29-31; and Fig. 2-5. The "keep" command is used to specify which options are to be merged onto the master list. Id., p. 80, ll. 12-15; p. 81, ll. 8-9; and Figs. 2-6 to 2-8. When an option on the master list is configured, "the change is propagated down to all of the components that kept the option." Id., p. 81, ll. 1-3. Those options that are not "kept" will be "*ignored by default*" and *not merged* to the master options list. Id., p. 81, ll. 10-14. That is, when a change is made to an option that has not been merged onto the master list of options, that change is not propagated. Id.

Thus, contrary to the Examiner's assertions, McLennan does not teach (either in the portions cited by the Examiner or anywhere else)

¹ In the Office Action dated June 27, 2005, the Examiner directs the reader to "see previous office action [i.e., the Office Action dated November 19, 2004] for rejection to claim 6-7." Office Action (June 27, 2005), p. 5, l. 21.

notifying objects of a change in an option value through a change handler identified by an option binding, the option binding being located by first searching a mapping data structure for a previously computed mapping to the option binding and, if no mapping was previously computed, by then computing the mapping to the option binding and storing the mapping in the mapping data structure

Claim 6, ll. 2-6.

Further, Owens et al. and Hostetter et al. are not relied upon to teach and, in fact, do not teach the above-noted deficiencies of McLennan. For at least these additional reasons, the Examiner's rejection of claim 6 lacks support in the references relied upon, and Applicants respectfully request that the rejection of this claim under 35 U.S.C. § 103(a) be withdrawn and the claims allowed.

Claims 11, 12, 23 and 24

Dependent claims 11, 12, 23 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over McLennan in view of Owens et al., Hostetter et al. and TK Library Procedures. However, these claims depend from one of independent claims 1 and 13. As explained above, the Examiner's rejections of claims 1 and 13 lack support in McLennan, Owens et al. and Hostetter et al., whether taken singly or in any combination. In addition, TK Library Procedures is not relied upon to teach and, in fact, does not teach the above-noted deficiencies of McLennan, Owens et al. and Hostetter et al. Consequently, the Examiner's rejection of claims 11, 12, 23 and 24 lacks support in the references relied upon, for at least the same reasons given above with respect to claims 1 and 13, and Applicants respectfully request that the rejection of

claims 11, 12, 23 and 24 under 35 U.S.C. § 103(a) be withdrawn and the claims allowed.

Conclusion

In addition to the above remarks, Applicants note that the Office Action dated June 27, 2005, contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

In view of the foregoing amendments and remarks, Applicants respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,
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Dated: December 23, 2005

By: 

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Attachments: Replacement Drawing Sheet 5/25 (one sheet) showing Figure 2F.